



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2022-1414; Project Identifier MCAI-2021-01303-E; Amendment 39-22304; AD 2023-01-10]**

**RIN 2120-AA64**

**Airworthiness Directives; GE Aviation Czech s.r.o. (Type Certificate Previously Held by WALTER Engines a.s., Walter a.s., and MOTORLET a.s.) Turboprop Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain GE Aviation Czech s.r.o. (GEAC) M601E-11, M601E-11A, M601E-11AS, M601E-11S, and M601F model turboprop engines. This AD was prompted by the exclusion of life limits for certain compressor cases and compressor drums from the airworthiness limitations section (ALS) of the engine maintenance manual (EMM). This AD was also prompted by certain compressor cases that, following rework, were improperly re-identified and the engine logbook entries were not completed. This AD requires recalculation of the consumed life for the affected compressor cases and compressor drums and, depending on the results of the recalculation, removal and replacement of the affected compressor case or compressor drum with a part eligible for installation. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:**

*AD Docket:* You may examine the AD docket at regulations.gov under Docket No.FAA-2022-1414; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

*Material Incorporated by Reference:*

- For GEAC service information identified in this final rule, contact GE Aviation Czech s.r.o., Beranových 65, 199 02 Praha 9, Letňany, Czech Republic; phone: +420 222 538 111.

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at regulations.gov under Docket No. FAA-2022-1414.

**FOR FURTHER INFORMATION CONTACT:** Barbara Caufield, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7146; email: barbara.caufield@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain GEAC M601E-11, M601E-11A,

M601E-11AS, M601E-11S, M601E-21, M601F, and M601FS model turboprop engines. The NPRM published in the *Federal Register* on November 09, 2022 (87 FR 67579). The NPRM was prompted by AD 2021-0264, dated November 22, 2021, issued by the European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union (referred to after this as the MCAI). The MCAI states that the life limits for certain compressor cases and compressor drums were not published in the applicable ALS of the EMM for certain GEAC M601 model turboprop engines. The MCAI also states that following rework of certain compressor cases from part number (P/N) M601-154.6 to P/N M601-154.51, those compressor cases were improperly re-identified and the engine logbook entries were not completed, which could cause the compressor case to remain in service beyond its applicable life limit. This condition can lead to failure of an affected part, possibly resulting in engine mount failure and high energy debris release.

In the NPRM, the FAA proposed to require recalculation of the consumed life for the affected compressor cases and compressor drums and, depending on the results of the recalculation, removal and replacement of the affected compressor case or compressor drum with a part eligible for installation. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-1414.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received no comments on the NPRM or on the determination of the costs.

### **Revision of Paragraph (c), Applicability**

In this Final Rule, the FAA has removed GEAC M601E-21 and M601FS model

turboprop engines from paragraph (c), Applicability, because those models do not have an FAA type certificate.

## **Conclusion**

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes and any other changes described previously, this AD is adopted as proposed in the NPRM.

## **Related Service Information under 1 CFR Part 51**

The FAA reviewed GEAC Alert Service Bulletin ASB-M601F-72-30- 00-0061 [01] and ASB-M601E-72-30- 00-0110 [01], (single document; formatted as service bulletin identifier [revision number]), dated October 15, 2021. This service information describes procedures for recalculation of the consumed life of certain compressor cases and compressor drums. This service information also provides the part numbers of the affected compressor cases and compressor drums installed on GEAC M601E-11, M601E-11A, M601E-11AS, M601E-11S, and M601F model turboprop engines.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

## **Costs of Compliance**

The FAA estimates that this AD affects 7 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

### Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Recalculate the consumed life of compressor case and compressor drum	.25 work-hours x \$85 per hour = \$21.25	\$0	\$21.25	\$148.75

The FAA estimates the following costs to do any necessary replacements that would be required based on the recalculated consumed life of the affected parts. The agency has no way of determining the number of aircraft that might need these replacements:

### On-condition costs

Action	Labor Cost	Parts Cost	Cost per product
Remove and replace compressor case	10 work-hours x \$85 per hour = \$850	\$5,000	\$5,850
Remove and replace compressor drum	40 work-hours x \$85 per hour = \$3,400	\$7,000	\$10,400

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2023-01-10 GE Aviation Czech s.r.o (Type Certificate previously held by WALTER Engines a.s., Walter a.s., and MOTORLET a.s.): Amendment 39-22304; Docket No. FAA-2022-1414; Project Identifier MCAI-2021-01303-E.**

**(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to GE Aviation Czech s.r.o. (GEAC) M601E-11, M601E-11A, M601E-11AS, M601E-11S, and M601F model turboprop engines, with an installed compressor case part number (P/N) M601-154.51, which includes compressor cases identified as, or recorded in the engine logbook as P/N M601-154.6; or with an installed compressor drum having P/N M601-130.7 or P/N M601-134.7.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7240, Turbine Engine Compressor Section.

**(e) Unsafe Condition**

This AD was prompted by the manufacturer's determination that the life limits for certain compressor cases and compressor drums were not published in the applicable airworthiness limitations section of the engine maintenance manual. Additionally, it was determined that following rework, certain compressor cases were improperly re-identified and the engine logbook entries were not completed. The FAA is issuing this AD to prevent the failure of the compressor case and compressor drum. The unsafe condition, if not addressed, could result in engine mount failure and high energy debris release.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

### **(g) Required Actions**

(1) Within 90 days after the effective date of this AD, recalculate the consumed life of the affected compressor case and affected compressor drum in accordance with the formula and lifing coefficients in paragraph 2.B., Table 1 of the Accomplishment Instructions of GEAC Alert Service Bulletin ASB-M601F-72-30-00-0061 [01] ASB-M601E-72-30-00-0110 [01] (single document; formatted as service bulletin identifier [revision number]), dated October 15, 2021.

(2) For GEAC M601E-11, M601E-11A, and M601F model turboprop engines, before the recalculated consumed life of an affected compressor case exceeds 11,000 equivalent flight cycles (FCs), replace the compressor case with a compressor case eligible for installation.

(3) For GEAC M601E-11S and M601E-11AS model turboprop engines, before the recalculated consumed life of an affected compressor case exceeds 11,000 equivalent FCs, or within 12 months after the effective date of this AD, whichever occurs first, replace the compressor case with a compressor case eligible for installation.

(4) For all affected engines with an installed compressor drum having P/N M601-130.7 or M601-134.7, before the recalculated consumed life of the compressor drum exceeds 6,750 equivalent FCs, or within 12 months after the effective date of this AD, whichever occurs first, replace the compressor drum with a compressor drum eligible for installation.

### **(h) Definition**

(1) For the purpose of this AD, a “compressor case eligible for installation” is:

(i) For GEAC M601E-11, M601E-11A, and M601F model turboprop engines, an affected compressor case that is identified as P/N M601-154.51 with no reference to other P/N’s and that does not have a recalculated consumed life that has exceeded its life limit, or a compressor case that is not P/N M601-154.51.



(ii) For GEAC M601E-11S and M601E-11AS model turboprop engines, a compressor case that is not P/N M601-154.51.

Note 1 to paragraph (h)(1): A compressor case having P/N M601-154.6 is not an approved configuration, and is not eligible for installation.

(2) For the purpose of this AD, a “compressor drum eligible for installation” is a compressor drum that is not P/N M601-130.7 or M601-134.7.

**(i) Alternative Methods of Compliance (AMOCs)**

The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in § 39.19. In accordance with § 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j)(2) of this AD and email to: ANE-AD-AMOC@faa.gov.

**(j) Additional Information**

(1) Refer to European Union Aviation Safety Agency (EASA) AD 2021-0264, dated November 22, 2021, for related information. This EASA AD may be found in the AD docket at regulations.gov under Docket No. FAA-2022-1414.

(2) For more information about this AD, contact Barbara Caufield, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7146; email: barbara.caufield@faa.gov.

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) GE Aviation Czech Alert Service Bulletin ASB-M601F-72-30-00-0061 [01] and ASB-M601E-72-30-00-0110 [01], (single document; formatted as service bulletin identifier [revision number]), dated October 15, 2021.

(ii) Reserved.

(3) For GEAC service information identified in this AD, contact GE Aviation Czech s.r.o., Beranových 65, 199 02 Praha 9, Letňany, Czech Republic; phone: +420 222 538 111.

(4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

Issued on January 11, 2023.

Christina Underwood, Acting Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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